

In the claims, please amend the following claims:

Sub B1 1.(amended) A process for forming a layer of low dielectric constant material having a predetermined thickness, comprising:

depositing a first layer of low dielectric constant material by means of plasma enhanced vapor deposition, at a first power level;

then, with no intervening steps, depositing a second layer of the low dielectric constant material by means of plasma enhanced vapor deposition, at a second power level that is higher than said first power level; and

repeating the preceding two steps until the predetermined thickness is reached.

Sub 2 9(amended) A process for depositing a layer of black diamond on a silicon wafer to a predetermined thickness, comprising:

through chemical vapor deposition, from a first gaseous mixture of methyl silane and nitrous oxide, enhanced by a helium plasma at a power level that is less than about 70 watts, depositing a low power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness between about 700 and 1,000 Angstroms;

then, with no intervening steps, through chemical vapor deposition, from a second gaseous mixture of methyl silane, nitrous oxide, and oxygen, enhanced by a helium plasma at a power level of between about 70 and 200 watts, depositing a high power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness

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between about 700 and 1,000 Angstroms; and

repeating the preceding two steps until said predetermined thickness is reached.

X2 end
b1 b2 b3
14.(amended) A process for forming a dual damascene structure on a silicon wafer,

comprising:

through chemical vapor deposition, from a first gaseous mixture of methyl silane and nitrous oxide, enhanced by a helium plasma at a power level that is less than about 70 watts, depositing a low power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness between about 700 and 1,000 Angstroms;

X3
then, with no intervening steps, through chemical vapor deposition, from a second gaseous mixture of methyl silane, nitrous oxide, and oxygen, enhanced by a helium plasma at a power level of between about 70 and 200 watts, depositing a high power layer of black diamond for about 10 seconds, thereby forming a layer having a thickness between about 700 and 1,000 Angstroms;

repeating the preceding two steps until a completed black diamond layer has been formed;

patterning and etching said completed black diamond layer in order to form a wiring trench;

patterning and etching said wiring trench down to the level of the silicon wafer, thereby forming a via hole;

depositing a layer of copper to a thickness sufficient to fill the via hole and to over-